CENCD-PE-ED-TE (CENCE-DE/16 Sep 93) (200-1a) 1st End
Mr. Warda/Emore/(312) 353-6363
SUBJECT: DERP FUDS Inventory Project Report (INPR) for Site No. E05MI003700, Camp Lucas/Former Fort Brady, Sault Ste. Marie, Michigan

Cdr, North Central Division, U.S. Army Corps of Engineers,
111 North Canal St., Chicago, IL 60606-7205 22 MAR 1994

THRU Cdr, Huntsville Division, ATTN: CEHND-ED-PM, P.O. Box 1600, Huntsville, AL 35807-4301

FOR HQUSACE (CEMP-RF), WASH DC 20314-1000

1. The INPR for Camp Lucas/Former Fort Brady is forwarded for appropriate action. The site is eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP FUDS) program. The site has a Risk Assessment Code of 2, indicating that a feasibility study is appropriate.

2. Recommend that CEHND concur with the recommendation for continued Ordnance and Explosive Waste (OEW) investigation (E05MI003701) and forward the report to CEMP-R for approval. The site is referred to CEHND for appropriate action on the PA file. The project is being included in the appropriate work plans.

3. Recommend that CEHND assign the archive search report to CENCD.

4. Referred to Missouri River Division (CEMRD) for information.

5. The HQ, NCD, POC is Mr. Bob Warda, Chief, CENCD-PE-ED-TE, (312) 353-3679.

for Robert E. Lockhorn LTC, EN
RICHARD W. CRAIG
Colonel, EN
Commanding

3 Encls
1-3. nc

CF:
CENCB-ED-HQ
CENCE-ED-D
CENCR-ED-DN
CEMRD-ED-E

DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
BOX 1027
DETROIT, MICHIGAN 48231-1027

IN REPLY REFER TO

CENCE-DE (200-1a)

16 SEP 93

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, North Central Division
ATIN: CENCD-PE-ED-TE (B. Warda), 111 North Canal Street,
Chicago, Illinois 60606-7205

SUBJECT: DERP FUDS Inventory Project Report (INPR) for Site No. E05MI003700 Camp Lucas/Former Fort Brady, Sault Ste. Marie, Michigan

1. This INPR reports on the DERP FUDS preliminary assessment of the remaining portion of Camp Lucas/Former Fort Brady within the City of Sault Ste. Marie, Michigan which was not covered under INPR Site No. E05MI013800, Former Camp Lucas. A site visit was conducted on 17 May 88 and follow-up coordination phone conversations occurred on 6 & 26 Apr 93. We determined that the site was formerly used by the U.S. Army. A recommended Findings and Determination of Eligibility which stipulates this is at Enclosure 1 for your signature.

2. We have also determined that there is no remaining evidence of unsafe debris or hazardous, toxic or radiological waste at the site which can be attributed to past utilization by the Department of Defense. However, there is evidence of ammunition storage bunkers and potential ordnance explosive waste remaining at the site. A site survey summary sheet with location, vicinity and site maps is at Enclosure 2. An OEW project summary sheet with DD Form 1391, scope of work, and Risk Assessment Code is at Enclosure 3. A site investigation is proposed for the OEW project.

3. Real Estate Division review concurs on eligibility of the site.

4. Recommend that you:

a. Approve and sign the Findings and Determination of Eligibility at Enclosure 1;

b. Forward a copy of this INPR to CENCR for their information and to CEHND for their PA file, and for OEW project action;

c. If OEW funds are provided during the first quarter of FY 95, then a site investigation can be completed during the fiscal year.

3 Encls

BRIAN J. OHLINGER
Colonel, Engineer
Commanding

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY
CAMP LUCAS AND FORMER FORT BRADY
SAULT STE MARIE, MICHIGAN
SITE NO. E05MI003700

FINDINGS OF FACT

1. The Site totalled 297.65 acres (192.77 fee acres, 102.35 leased acres, and 2.53 easement acres). On 18 December 1886, 73 fee acres were acquired from Thomas & Anna Ryan. An additional 124.15 fee acres were purchased from the City of Sault Ste. Marie, Michigan in 1950. The deed contained a reverter clause upon abandonment. On 13 March 1951, 4.16 fee acres were acquired from Hildaige and Elise Bourque. During WWII 41 acres were leased. In the 1950s an additional 93.17 acres were leased for Camp Lucas. Of the 41 leased acres, 31.82 acres were later acquired in fee and included in the 124.15 fee acres. In 1944, the 2.53 acres of utility easements were acquired. Site No. E05MI013800 reported on 8.54 acres of the 124.15 acres. This leaves 192.77 fee acres to be reported in this report.

2. The Site included Fort Brady Military Reservation and Camp Lucas. The United States commissioned Fort Brady in 1886, and Camp Lucas in 1950.

3. On 1 October 1945, DOD reported the 73.00 fee acres as excess property. The Government conveyed the 73.00 acres to the Michigan College of Mining and Technology on 24 March 1947. A twenty-five year reverter clause has expired. On 10 August 1961, DOD reported 119.77 fee acres to GSA. On 11 April 1966, 114.17 fee acres were returned to the City of Sault Ste. Marie in compliance with the reverter clause in the deed. The United States conveyed 1.44 acres to the State of Michigan for highway purposes on 20 November 1967, after the City conveyed its interests and reversionary rights in the land to the Government. In April 1964, GSA conveyed 4.16 acres to the First Free Methodist Church of Sault Ste. Marie. On 28 October 1952, the 2.53 acres of utility easements expired. The leases on the 102.35 acres terminated between 1953 and 1961.

DETERMINATION

Based on the findings of fact, the Site was formerly used by the Department of Defense. Therefore, it is eligible for the Defense Environmental Restoration Program under 10 U.S.C. 2701 et. seq.

22 MAR 94
DATE

Robert C. Clockbower LTC, EN
RICHARD W. CRAIG
Colonel, U.S. Army
Commander and Division Engineer

SITE SURVEY SUMMARY SHEET
FOR
DERP FUDS SITE NO. E05MI003700
CAMP LUCAS AND FORMER FORT BRADY
SEPTEMBER 1993

SITE NAME: Camp Lucas and Former Fort Brady. The majority of this site is currently owned by Lake Superior State University (LSSU) and the City of Sault Ste. Marie, Michigan.

LOCATION: The site is located in Sault Ste. Marie, Chippewa County, Michigan.

SITE HISTORY: The combined Camp Lucas/Fort Brady totalled 297.65 acres (192.77 fee acres, 102.35 leased acres, and 2.53 easement acres). On 18 December 1886, 73 fee acres were acquired from Thomas and Anna Ryan by the War Department to establish Fort Brady. During WWII Fort Brady was expanded by the addition of 41 leased acres and 2.53 utility easement acres. Camp Lucas was principally established in 1950, when 124.15 fee acres were purchased by the Department of Defense from the City of Sault Ste. Marie, Michigan. Of this amount, 8.54 fee acres were reported on under INPR Site No. E05MI013800, Former Camp Lucas-Michigan National Guard. Camp Lucas was expanded on 13 March 1951, when 4.16 fee acres were acquired from Hildaige and Elise Bourque. In addition, during the 1950's an additional 93.17 acres were leased for Camp Lucas. Of the 41 leased acres acquired to expand Fort Brady during WWII, 31.82 acres were later acquired in fee for Camp Lucas and are included in the initial 124.15 fee acres. Fort Brady/Camp Lucas consisted of 64 buildings that included troop housing facilities, hospitals, utility and service buildings. Between 1950 and 1966, Camp Lucas was an active installation under the jurisdication of the Department of the Army. The Fifth U.S. Army's 8th AAA AW Battalion was stationed at Camp Lucas with the primary task of protecting the Soo Locks from foreign attack. On 1 October 1945, DOD reported the 73.00 fee acres as excess property. The Government conveyed the 73.00 acres to the Michigan College of Mining and Technology on 24 March 1947. On 10 August 1961, DOD reported 119.77 fee acres to GSA. On 11 April 1966, 114.17 fee acres were returned to the City of Sault Ste. Marie in compliance with the reverter clause in the deed. The United States conveyed 1.44 acres to the State of Michigan for highway purposes on 20 November 1967, after the City conveyed its interests and reversionary rights in the land to the Government. In April 1964, GSA conveyed 4.16 acres to the First Free Methodist Church of Sault Ste. Marie. On 28 October 1952, the 2.53 acres of utility easements expired. The leases on the 102.35 acres terminated between 1953 and 1961. Available information shows the former Camp Lucas/Fort Brady Site is owned by the City of Ste. Marie, Michigan, the Lake Superior State College and various private individuals.

SITE VISIT: A site visit was conducted on 17 May 88 by Carl Woodruff and Stan Jacek of the Detroit District and Earl Tomlinson and Ross Patterson of LSSU. Follow up coordination by phone calls occurred on 6 Apr 93 with Stephen Gregorich, Sault Ste. Marie City Engineer and with John Parker, Director of Physical Plant for LSSU. Also, on 26 Apr 93 a follow up phone conversation was made to Jim Hendricks, Department of Planning and Development for the City of Sault Ste. Marie, MI. In regard to the proposed OEW project, Mr. Chris Churney, CENCR-ED-DN, made a site visit during May 1993.

CATAGORY OF HAZARD: OEW.

PROJECT DESCRIPTION: There is one potential project at this site.

a. OEW (Project No. E05MI003701). An OEW site investigation (SI) is recommended to determine/confirm the presence of ordnance contamination at this site. This project is proposed because ammunition storage buildings/bunkers were built at the site while under DOD ownership. It has been reported that one of the buildings or bunker type structures remains as a support for an above ground walkway. It is possible that some ordnance, particularly 75 mm antiaircraft rounds, may still be at the site. The historical records search is recommended to determine the munitions and other associated hazards stored and/or used at the site and the potential safety hazards involving OEW. In addition to an extensive historical records search, personnel interviews, a site inspection, site evaluation and a report summarizing the historical records search will be accomplished.

AVAILABLE STUDIES AND REPORT: Real Estate documentation is available at the Detroit District Office of the U.S. Army Corps of Engineers.

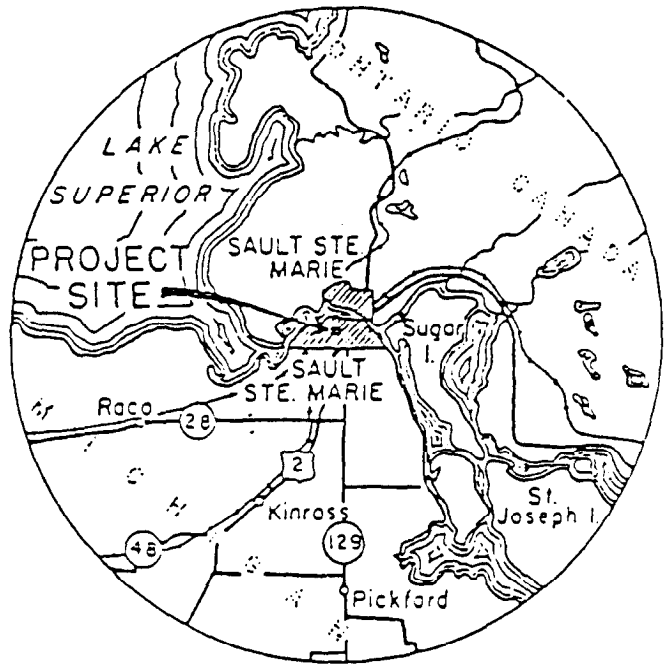
POC/DISTRICT: Mr. Michael J. Geiger, CENCE-ED-DC, (313) 266-6071.

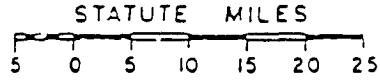
POC/LOCALS: Lake Superior State University - Mr. John Parker, Director of Physical Plant, 1000 College Drive, Sault Ste. Marie, MI 49783 (906) 635-2372.

City of Sault Ste. Marie - Mr. Spencer Nebel, City Manager, 325 Court Street, Sault Ste. Marie, MI 49783, (906) 635-5261.

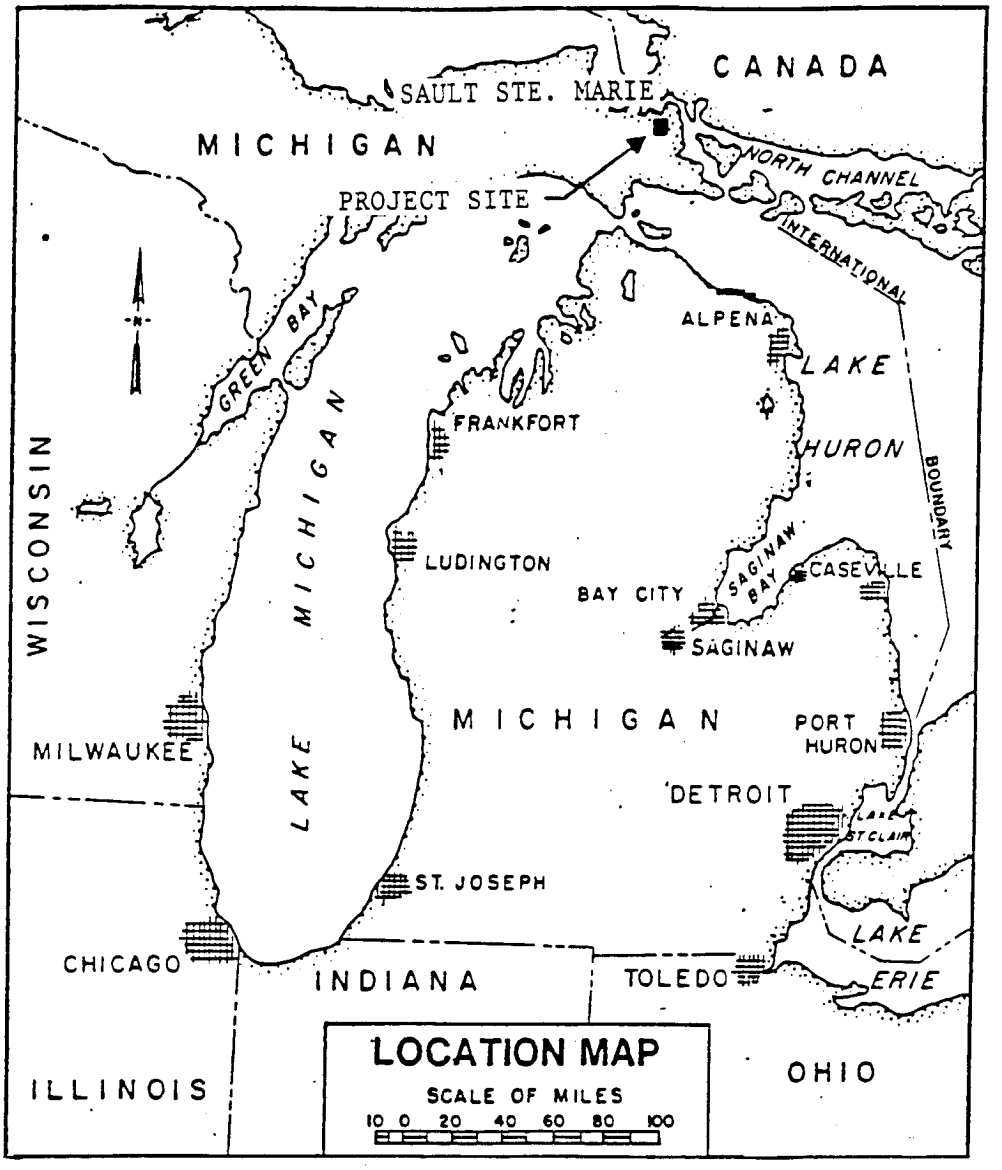
LOCAL POC VIEW: No knowledge of additional environmental or physical safety problems from previous military activities.

SPECIAL CONSIDERATIONS: There is an ongoing DERP FUDS site remediation project on 8.54 acres of city property which was reported on under INPR Site No. E05MI013800. Eight (8) buildings, five (5) UST's and one (1) waste oil tank will be removed. Of the remainder of Camp Lucas/Fort Brady not reported on under INPR Site No. E05MI013800, there is no knowledge of hazardous, toxic, or radiological waste or debris remaining from past utilization of the site by DOD. LSSU removed the last two UST's believed to have been associated with the former military installation. This included one (1) 8,000 gallon UST located on campus between the Chippewa and Laker Houses on 13 Oct 90. The second UST, being 10,000 gallons, was removed in Aug 87 and was located near Fort Brady Hall. Both UST's contained #2 fuel oil and varying amounts of water. No contamination was identified during removal activities. LSSU stated that 2 transformers were replaced and 3 transformers were retrofilled in 1988. Only 1 of these transformers, located at East Hall, may have been associated with the original fort. Finally, there are approximately 20 buildings remaining at LSSU which were part of the original Fort Brady/Camp Lucas. All are in good shape and actively used by the college as class rooms, offices, etc. The local contacts have stated that they are not aware of any further hazardous, toxic or radiological waste or building debris remaining other than the ongoing remediation project reported on under INPR Site No. E05MI013800.





VICINITY MAP
CAMP LUCAS/FORMER FORT BRADY
SAULT STE. MARIE, MICHIGAN
SITE NO. E05MI003700



LOCATION MAP
CAMP LUCAS/FORMER FORT BRADY
SAULT STE. MARIE, MICHIGAN
SITE NO. E05MI003700

PROJECT SUMMARY SHEET
FOR
DERP FUDS OEW PROJECT E05MI003701
FORMER CAMP LUCAS/FORT BRADY
SITE NO. E05MI003700
SEPTEMBER 1993

PROJECT DESCRIPTION: An OEW project is proposed at the site which involves a historical records search, personnel interviews, a site inspection, site evaluation and a report summarizing the historical records search and remediation as necessary. This project is proposed because ammunition storage buildings were built at the site while under DoD ownership. Also, the 6 July 1959 edition of the Lucas Lantern, the post newspaper, indicates the post supported the defense of the Soo Locks with 75mm anti-aircraft guns. Some ordnance, particularly 75mm anti-aircraft rounds, may still be at the site. The historical records search is recommended to determine the munitions and other associated hazards stored and/or used at the site and the potential safety hazard involving OEW.

PROJECT ELIGIBILITY: Records and site maps indicate the site was owned by DoD and used as a Camp and Fort while under DoD ownership.

POLICY CONSIDERATIONS: The current owners were very cooperative during the PA phase, and they indicated they would cooperate with USACE if further actions were needed. The site is eligible for investigation under current policy.

PROPOSED ACTIVITIES: The proposed activity would consist of an extensive historical records search, personnel interviews, a site inspection, site evaluation and a report summarizing the historical records search and remediation as necessary.

SPECIAL CONSIDERATIONS: Site maps indicate 7 or 8 igloos existed at the site. Currently only one is visible and is currently used by the city of Sault Ste. Marie as part of the I-500 snowmobile race track. The remaining igloos are believed to be buried in a ridgeline adjacent to the race track. Camp Lucas supported the defense of the Soo Locks, which was defended by 75mm AA guns according to a 6 July 1959 edition of the post newspaper. Mr. Alden Campbell, a Lake Superior State University employee for 20+ years, knows of no incidents involving OEW at the site.

CURRENT OWNERS DESIRES: Mr. John Parker, the Lake Superior State University representative, and Mr. Jim Hendricks, the City of Sault Ste. Marie representative, support the proposed activities.

LOCAL POC: Mr. John Parker, Lake Superior State University, Director of Physical Plant, Sault Ste. Marie, MI. 49783 (906) 635-2372

Mr. Jim Hendricks, City of Sault Ste. Marie,
1301 West Easterday Avenue, Sault Ste. Marie, MI. 49783
(906) 635-1521

DISTRICT POC: Mr. Christopher J. Churney, CENCR-ED-DN,
(309) 794-5773

Mr. Michael J. Geiger, CENCE-ED-DC, (313) 226-6071

RAC: 2 (Attached: see encl 2)

11 Mar 94
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	Former Fort Brady	Rater's Name	Greg Frazier
Site Location	Michigan	Phone No.	(205) 955-2373
DERP Project #	E05MI003700	Organization	CEHND-PM-SO
Date Completed	21 Jan 94	RAC Score	RAC 2

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10 (circled)
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10 (circled)
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4 (circled)
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1 (circled)
Conventional Ordnance and Ammunition (Select the largest single value)	10

What evidence do you have regarding conventional OEW? AAA Battalion stationed here.

B. Pyrotechnics (For munitions not described above.)

	VALUE
Munition (Container) Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethlaluminum Metal Incendiaries)	6
Flares,Signals, Simulators	4
Pyrotechnics (Select the largest single value)	___

What evidence do you have regarding pyrotechnics? From AMA Bv

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? _____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	0

What evidence do you have regarding bulk propellants? _____

E. Radiological/Chemical Agent/Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear, incendiary and smoke)	5

Radiological/Chemical Agent (Select the largest single value) 1

What evidence do you have of chemical/radiological OEW? _____

_____

==========

TOTAL HAZARD SEVERITY VALUE 14

(Sum of Largest Values for A through E--Maximum of 61)

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	22 and greater
CRITICAL	II	11 to 21
MARGINAL	III	6 to 10
NEGLIGIBLE	IV	1 to 5
**NONE		0

*** Apply Hazard Severity Category to Table 3.**

_____

_____

****If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.**

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	(2)

Location (Select the single largest value) 2

What evidence do you have regarding location of OEW? No Surface Ordnance, any ordnance left would be Subsurface

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	(5)
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) 5

What are the nearest inhabited structures? Mobile homes, Less bldgs, small Commercial.

C. Numbers of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	(5)
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) 5

Narrative Mix of buildings types (cases.

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	(5)
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) 5

Describe types of buildings in the area. Mostly residential

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) 4

Describe the site accessibility. Barrier around is no Area where should be most of the installation.

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabitated areas or otherwise increase accessability.

	VALUE
Expected	(5)
None Anticipated	0

Site Dynamics (Select largest value) 5

Describe the site dynamics. LSSA is constructing new buildings

TOTAL HAZARD PROBABILITY VALUE

(Sum of Largest Values for A through F--Maximum of 30) ___

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	28 or greater
PROBABLE	B	22 to 27
OCCASIONAL	C	16 to 21
REMOTE	D	9 to 15
IMPROBABLE	E	less than 9

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE (B)	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	(II)	1	(2)	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR - Recommend further action by CEHND.

RAC 3 Complete INPR - Recommend further action by CEHND.

RAC 4 Complete INPR - Recommend further action by CEHND.

RAC 5 Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

[redacted] RAC 2 is indicated primarily because of the past use as an AAP BN site and the installations close proximity to the city.